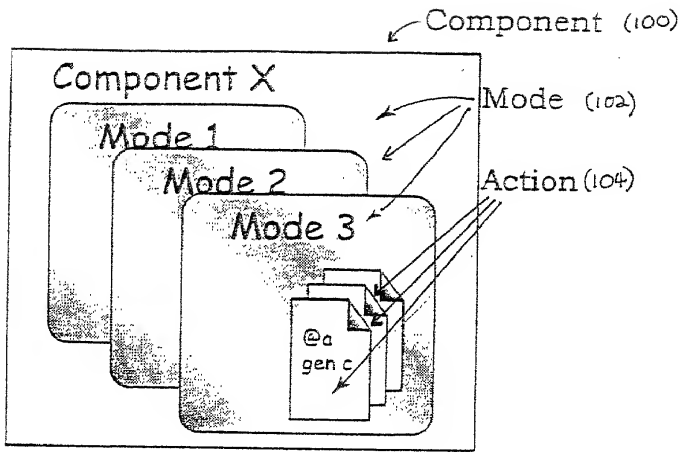

Component (100)
Component X
Mode (102)
Mode 1
Mode 2
Mode 3
Action (104)
@a
gen c

Figure 1

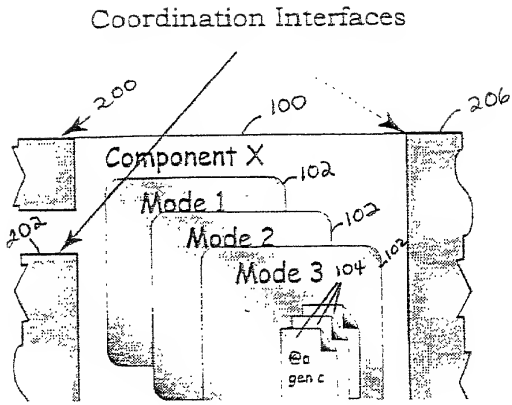

Coordination Interfaces
200
100
206
Component X
102
Mode 1
102
Mode 2
102
Mode 3
104
202
@a
gen c

Figure 2

Docket 03-1-1660

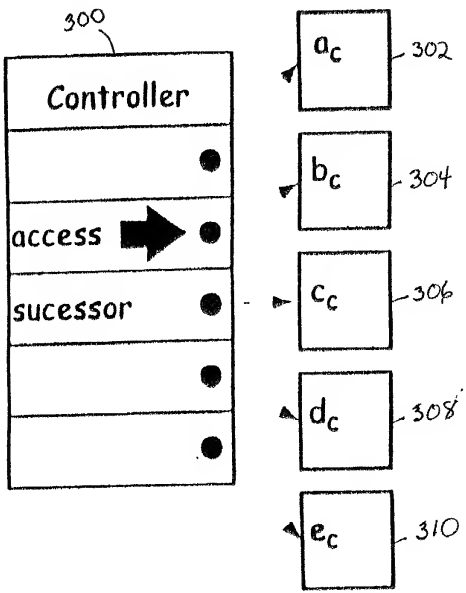


Figure 3A

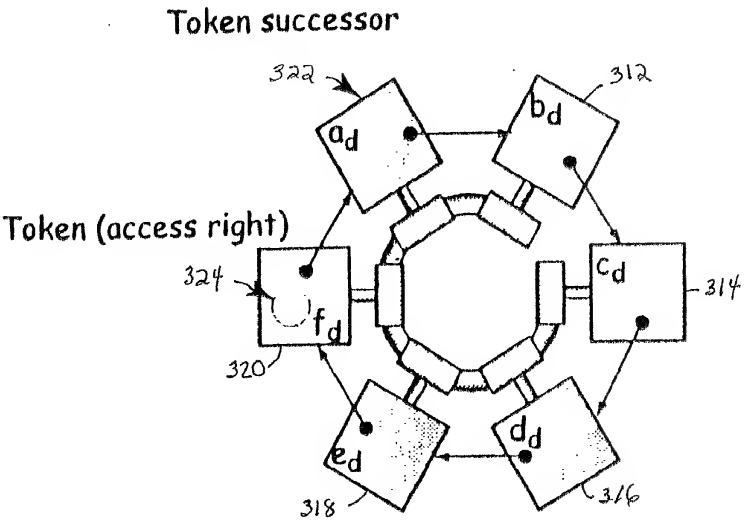


Figure 3B

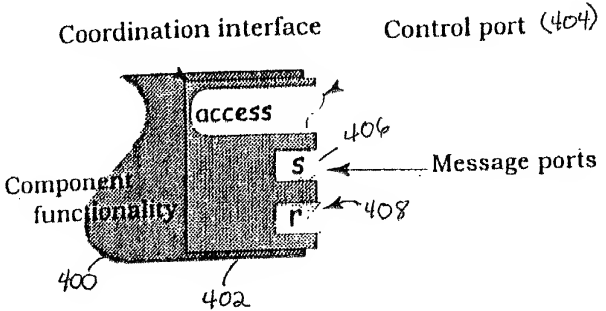


Figure 4A

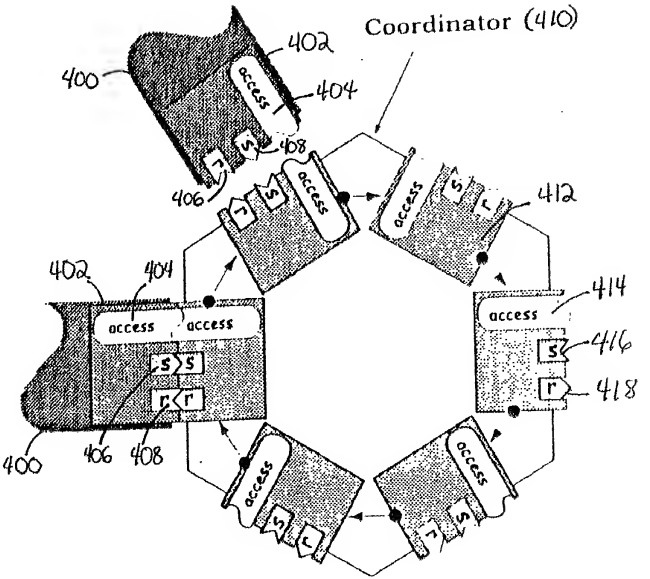


Figure 4B

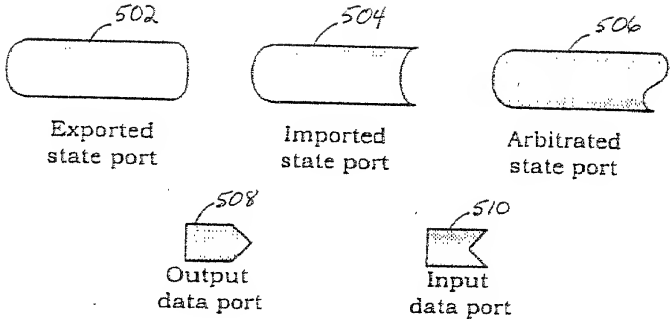

502
Exported state port
504
Imported state port
506
Arbitrated state port
508
Output data port
510
Input data port

Figure 5

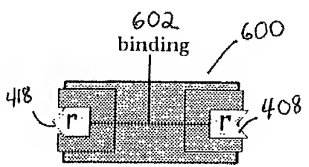


Figure 6A

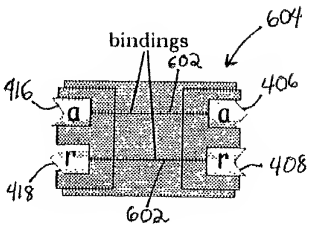


Figure 6B

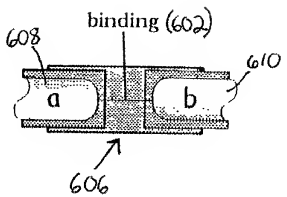


Figure 6C

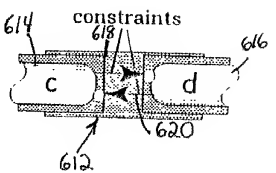


Figure 6D

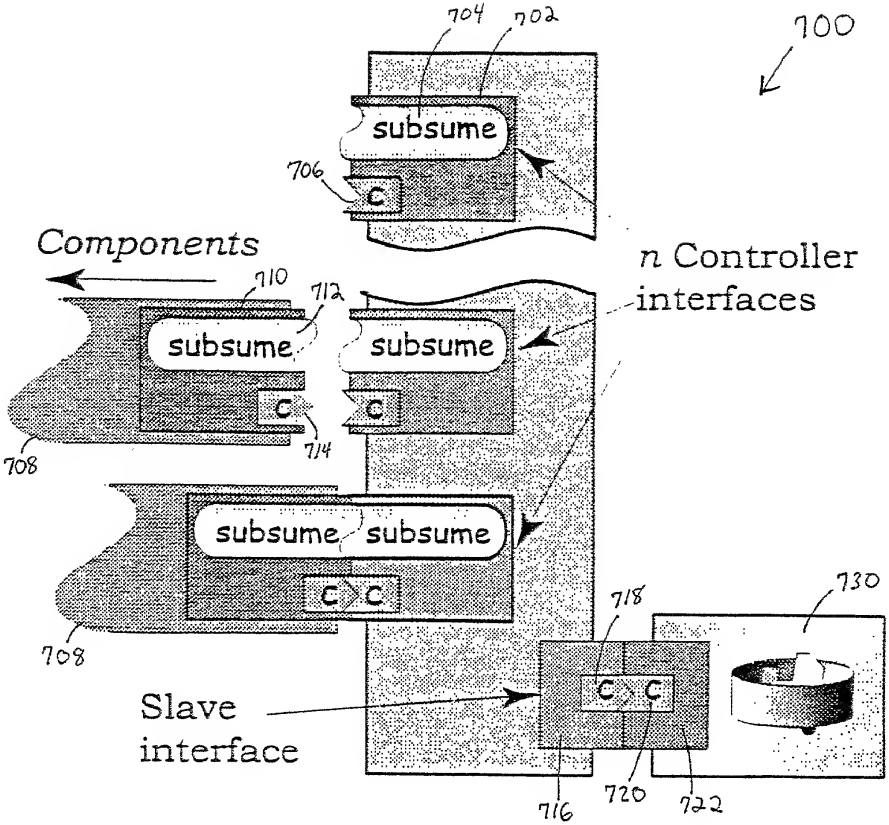

700
704
702
subsume
706
C
Components
n Controller
interfaces
710
712
subsume
subsume
C
C
714
708
subsume
subsume
C
C
708
718
730
C
C
Slave
interface
716
720
722

Figure 7

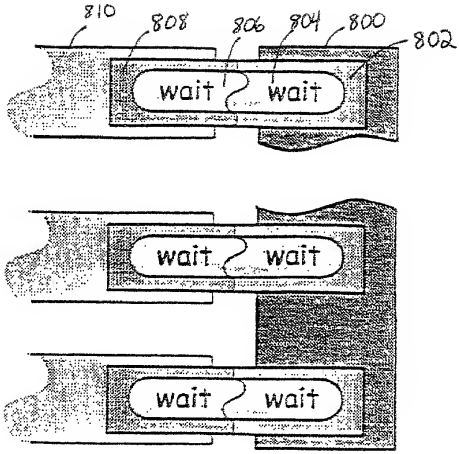


Figure 8

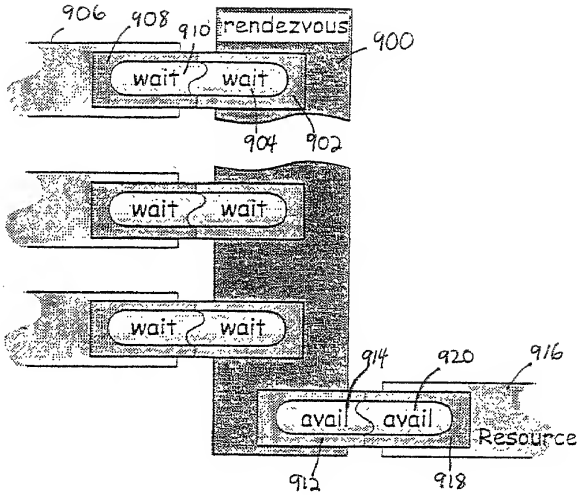

906
908
910
rendezvous
900
wait
wait
904
902
wait
wait
wait
wait
914
920
916
avail
avail
Resource
912
918

Figure 9

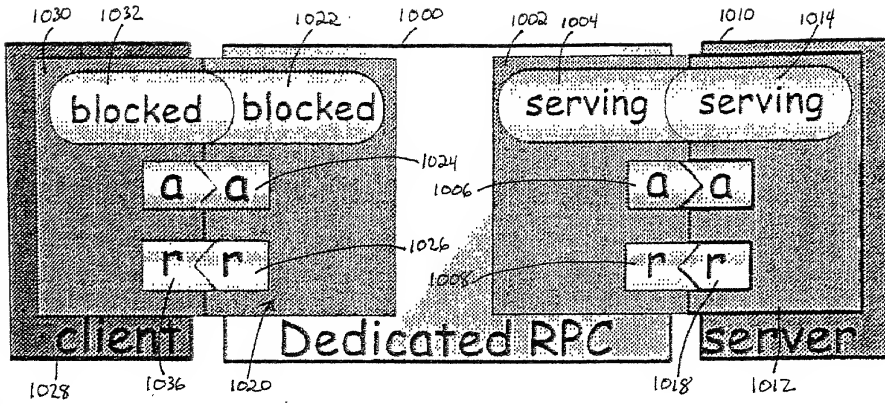

1030
1032
1022
1000
1002
1004
1010
1014
blocked
blocked
serving
serving
1024
1006
a
a
a
a
1026
1008
r
r
r
r
client
Dedicated RPC
server
1028
1036
1020
1018
1012

Figure 10

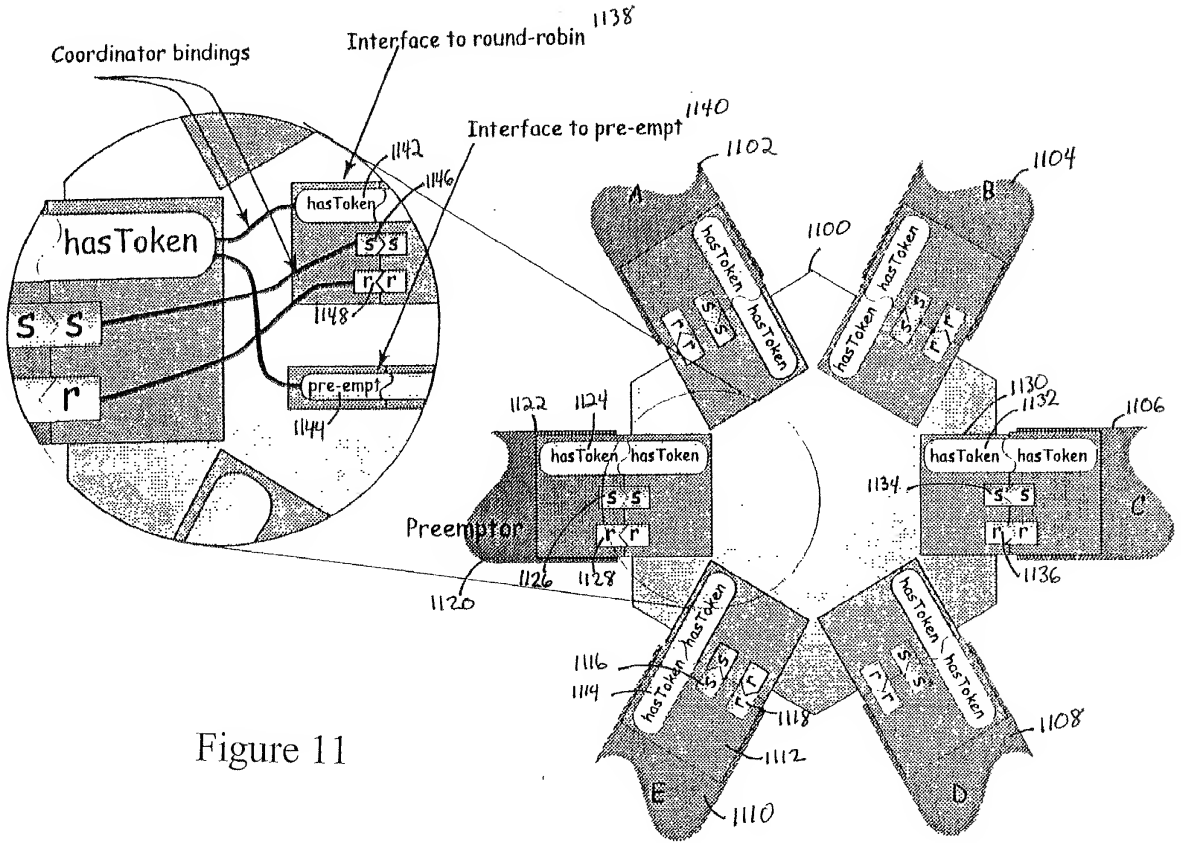

Coordinator bindings
Interface to round-robin
1138
Interface to pre-empt
1140
hasToken
s s
r r
1142
1146
1148
pre-empt
1144
1102
1104
1100
A
B
1122
1124
Preemptor
1126
1128
1120
1130
1132
1106
C
1134
1136
1116
1114
1118
1112
1110
1108
E
D

Figure 11

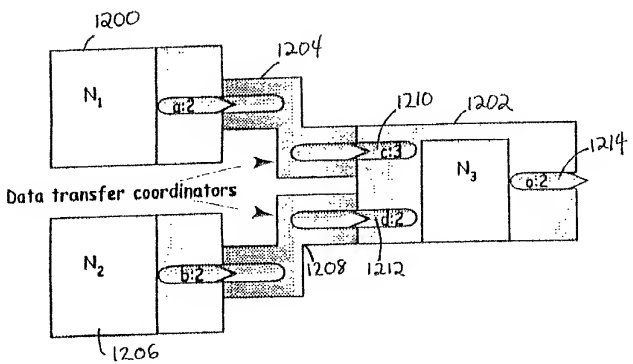


Figure 12A

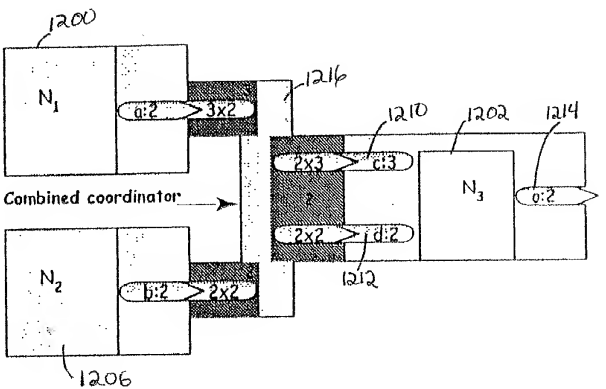


Figure 12B

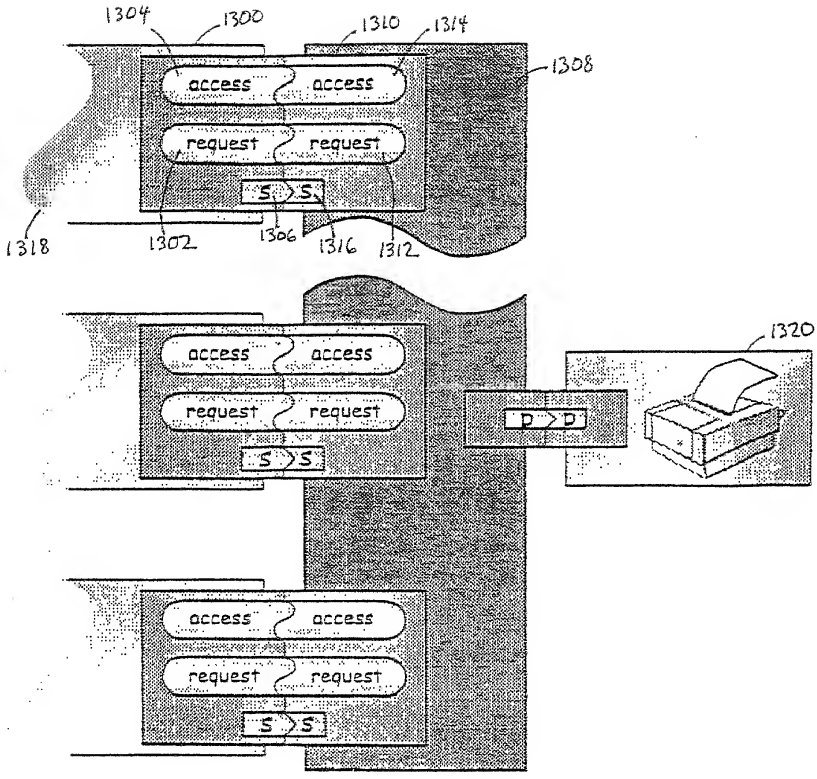

1304
1300
1310
1314
1308
access
access
request
request
S
S
1318
1302
1306
1316
1312
1320
access
access
request
request
S
S
P
P
access
access
request
request
S
S

Figure 13

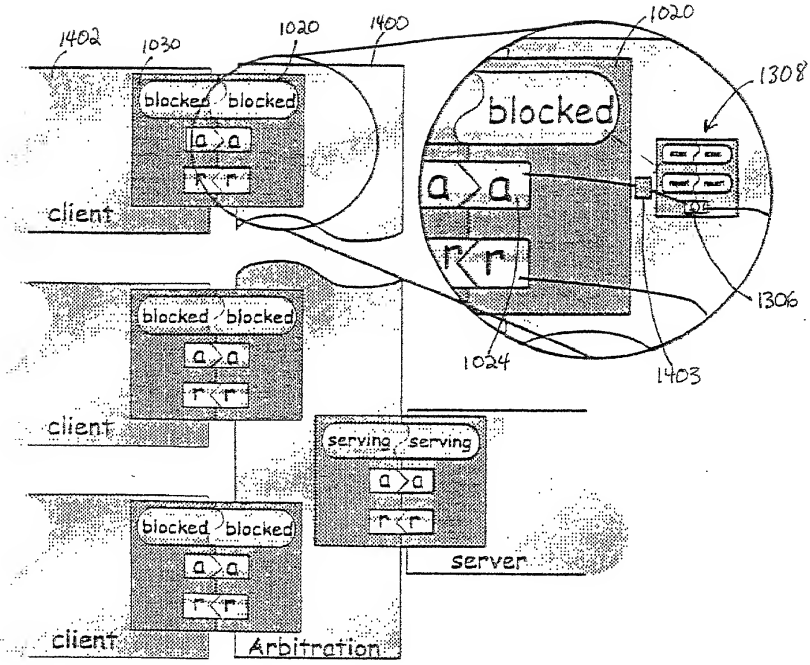

1402
1030
1020
1400
1020
1308
blocked
blocked
a a
r r
client
blocked
1306
1024
1403
serving
serving
server
Arbitration

Figure 14

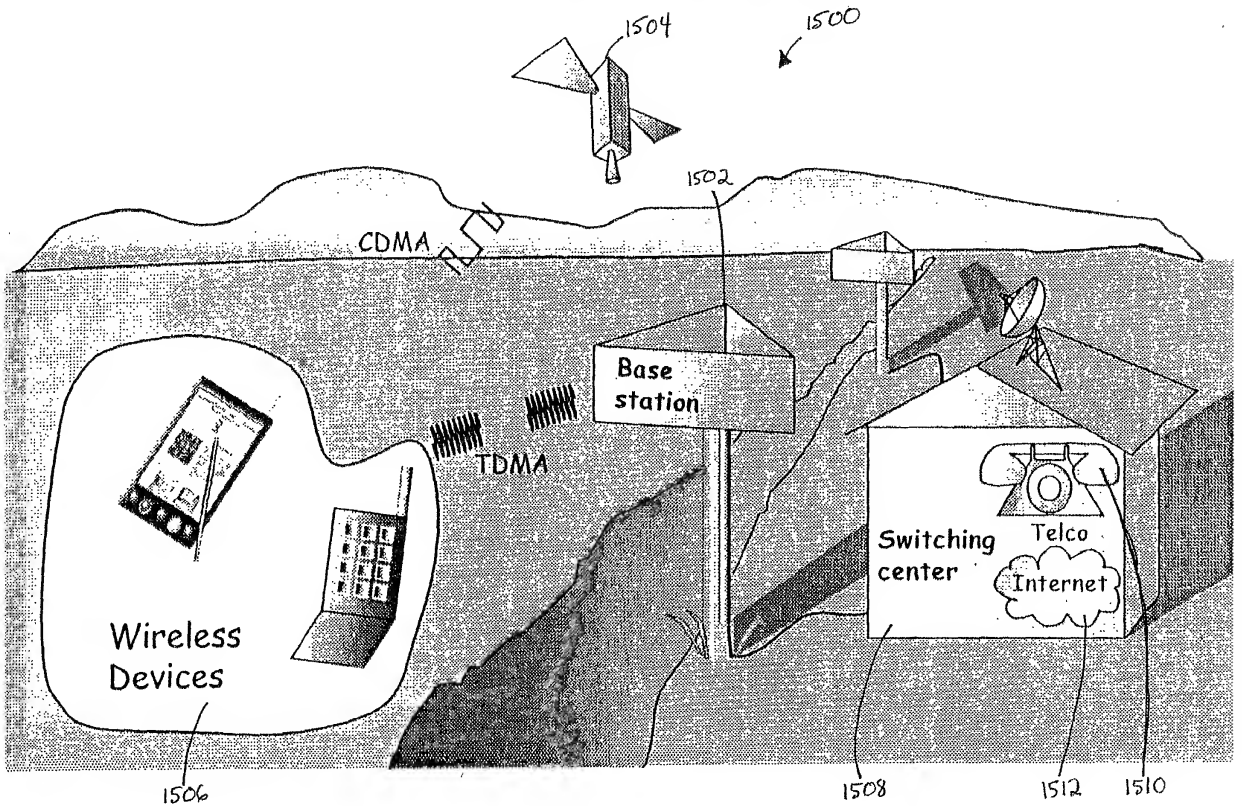

1504
1500
1502
CDMA
Base station
TDMA
Switching center
Telco
Internet
Wireless Devices
1506
1508
1512
1510

Figure 15

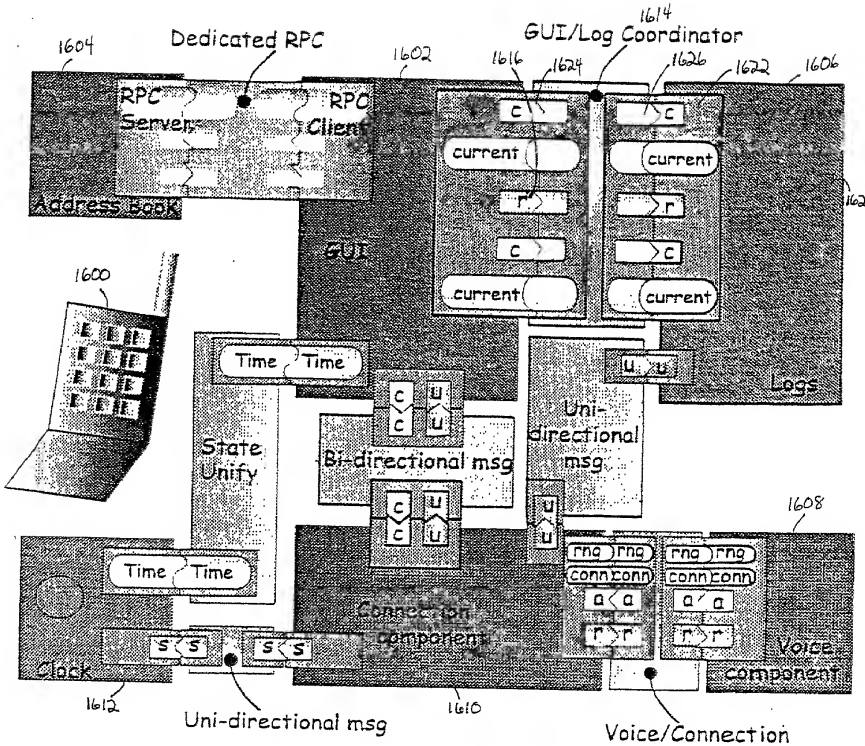

1604
Dedicated RPC
1614
GUI/Log Coordinator
1602
1616
1624
1626
1622
1606
RPC Server
RPC Client
Address Book
GUI
current
1620
1600
Time
State Unify
Bi-directional msg
Uni-directional msg
Logs
1608
rng
conn
Connection component
Voice component
Clock
1612
1610
Uni-directional msg
Voice/Connection

Figure 16

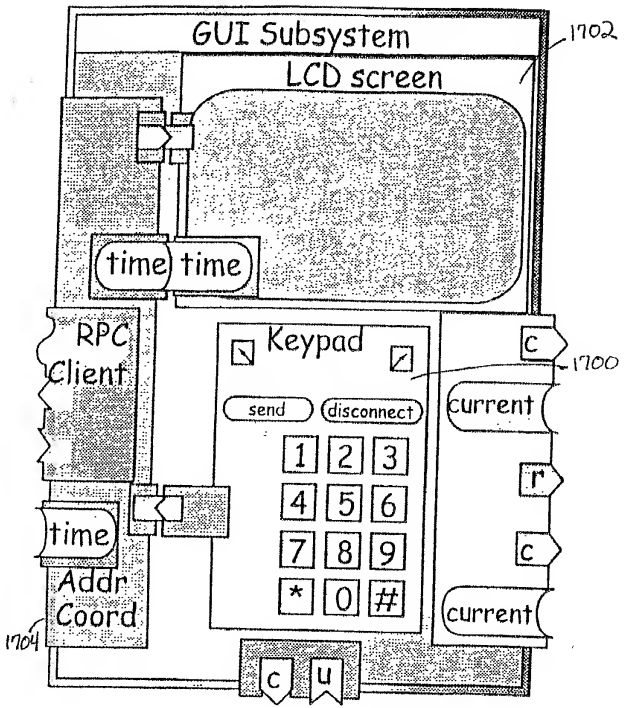


Figure 17A

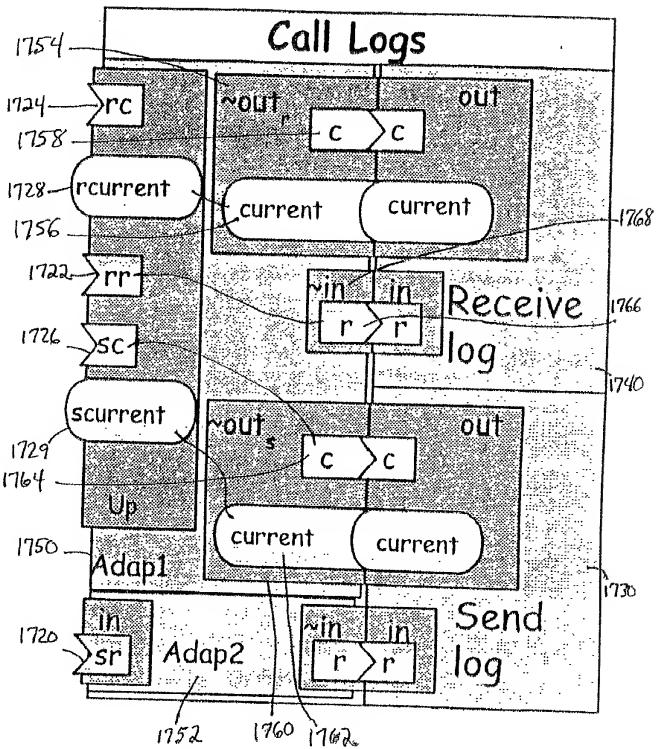


Figure 17B

TOUCH3D 03/30/00

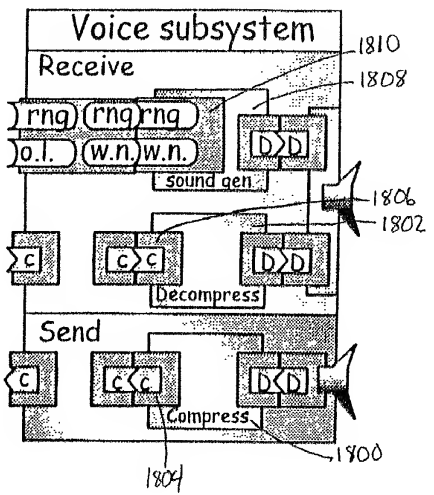


Figure 18A

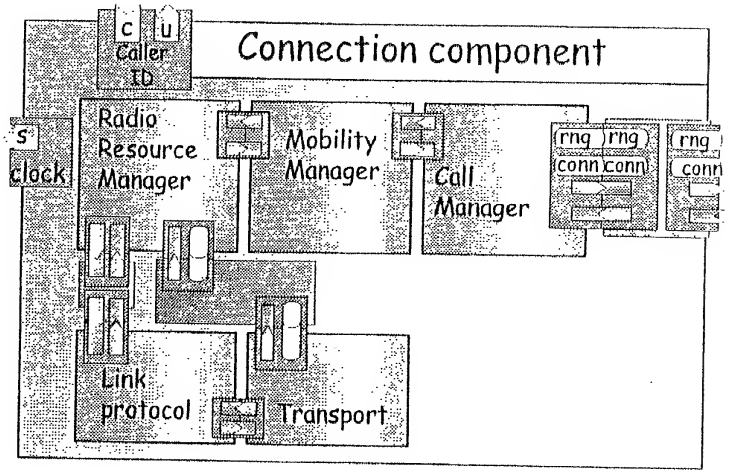


Figure 18B

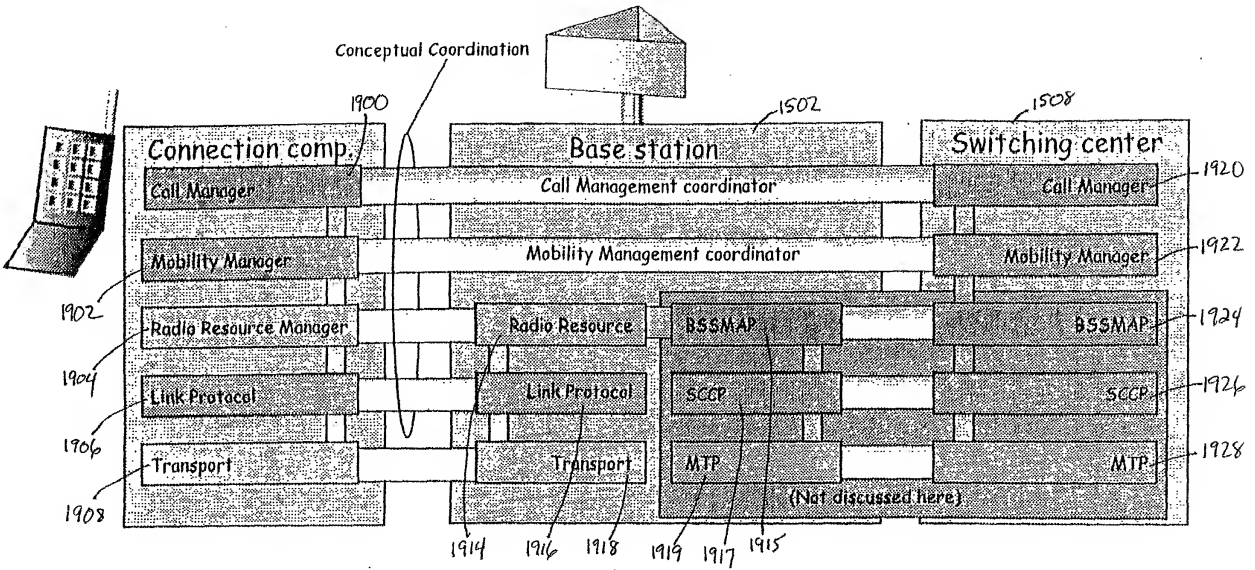

Conceptual Coordination
1900
1502
1508
Connection comp.
Base station
Switching center
Call Manager
Call Management coordinator
Call Manager
1920
Mobility Manager
Mobility Management coordinator
Mobility Manager
1922
1902
Radio Resource Manager
Radio Resource
BSSMAP
BSSMAP
1924
1904
Link Protocal
Link Protocal
SCCP
SCCP
1926
1906
Transport
Transport
MTP
MTP
1928
1908
(Not discussed here)
1914
1916
1918
1919
1917
1915

Figure 19

DOCKET 05138800

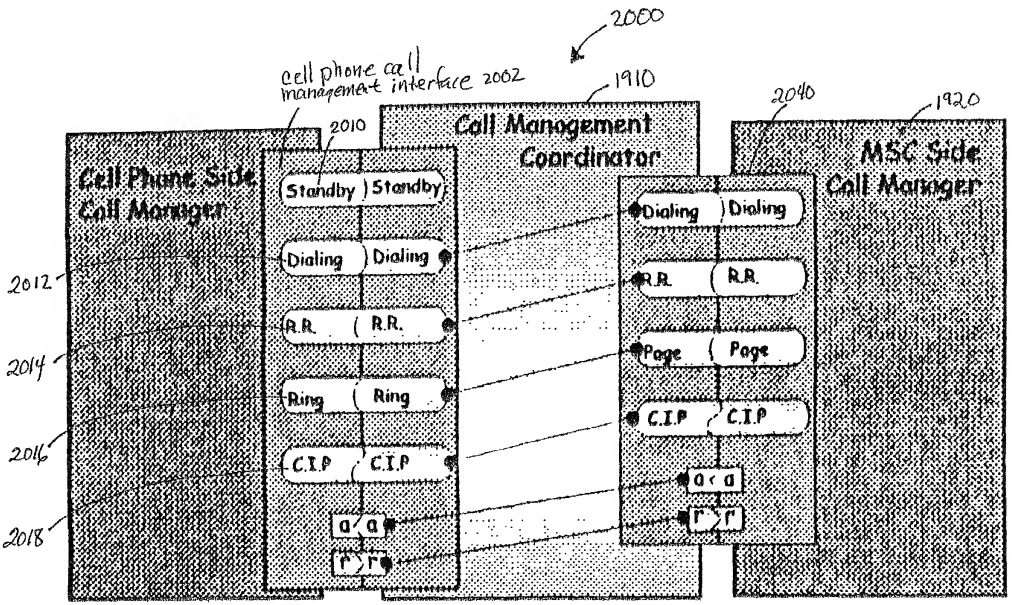


Figure 20

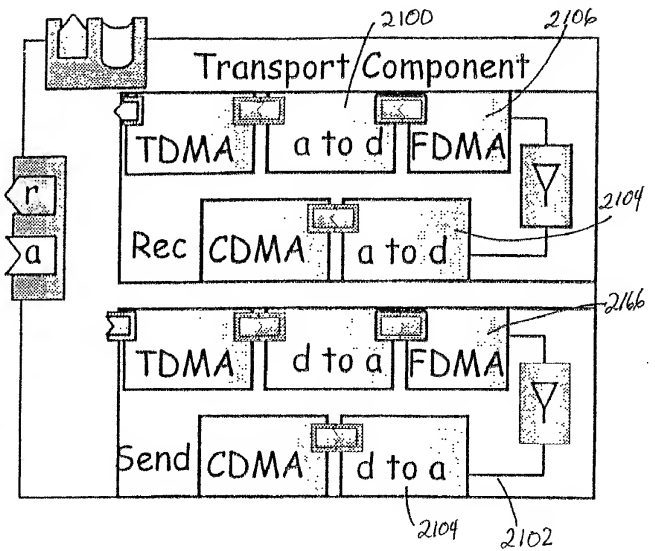


Figure 21A

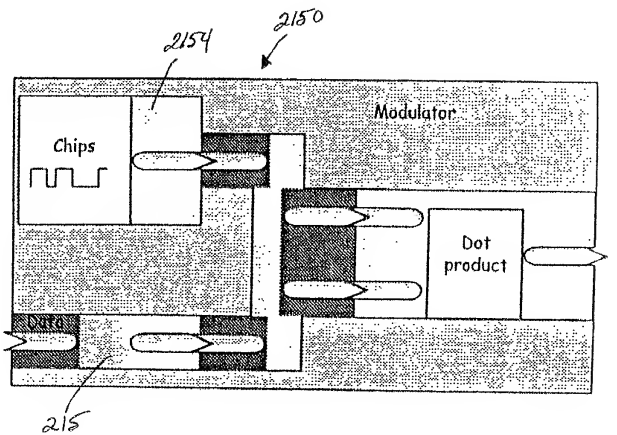


Figure 21B

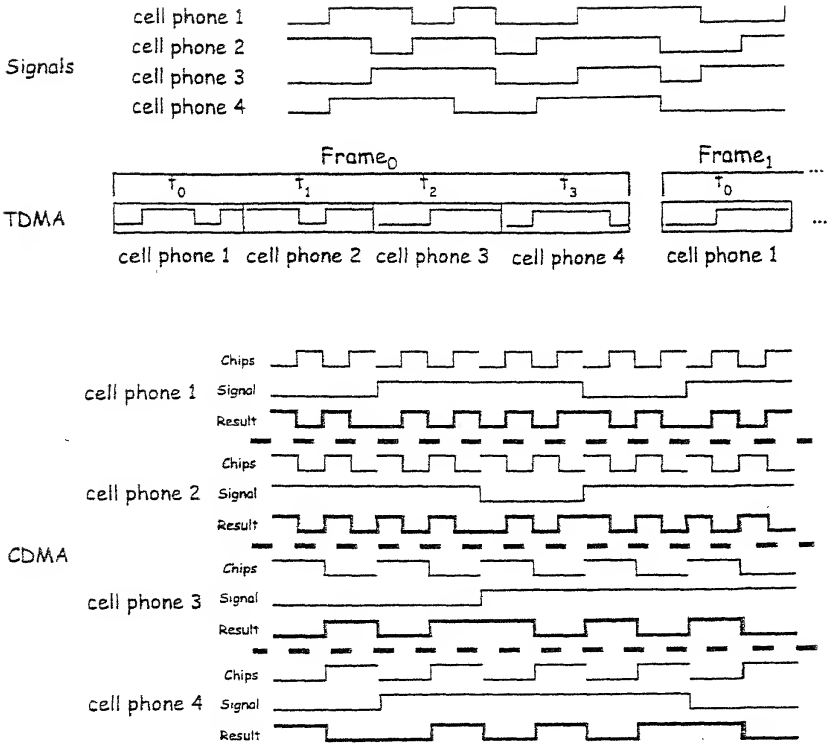

Signals
cell phone 1
cell phone 2
cell phone 3
cell phone 4
TDMA
Frame0
Frame1
T0
T1
T2
T3
T0
cell phone 1
cell phone 2
cell phone 3
cell phone 4
cell phone 1
CDMA
cell phone 1
cell phone 2
cell phone 3
cell phone 4
Chips
Signal
Result

Figure 22

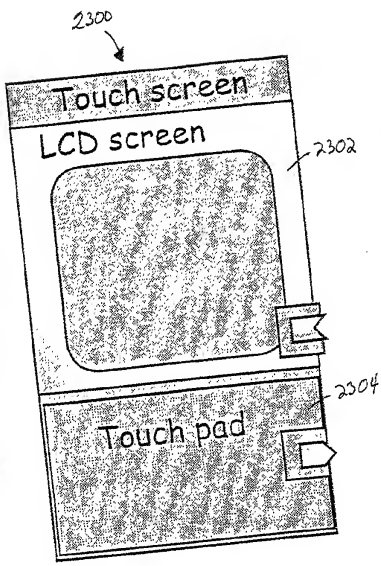


Figure 23A

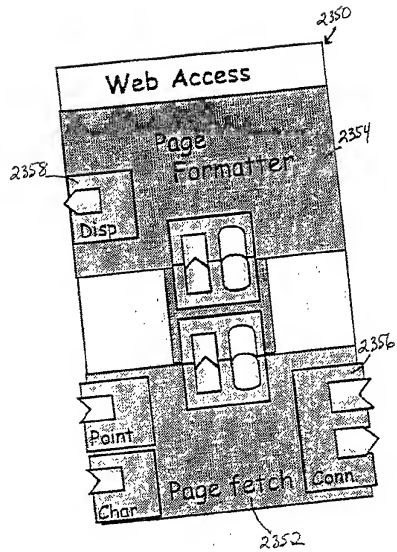


Figure 23B

TOUCH SENSOR

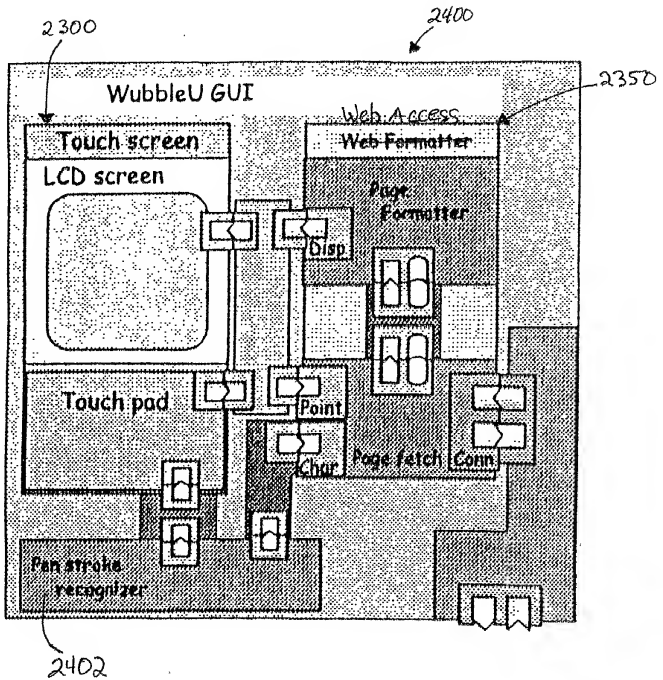


Figure 24A

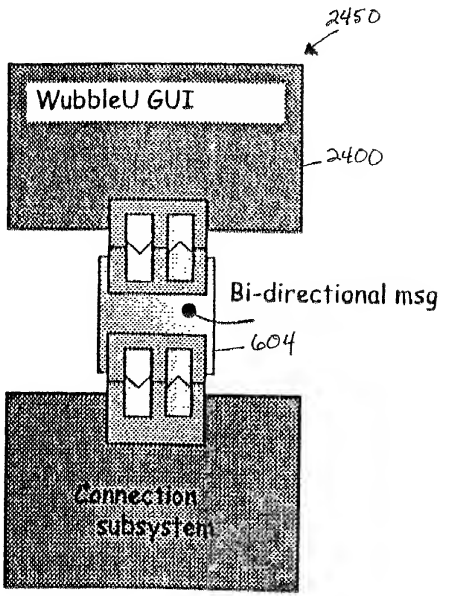


Figure 24B

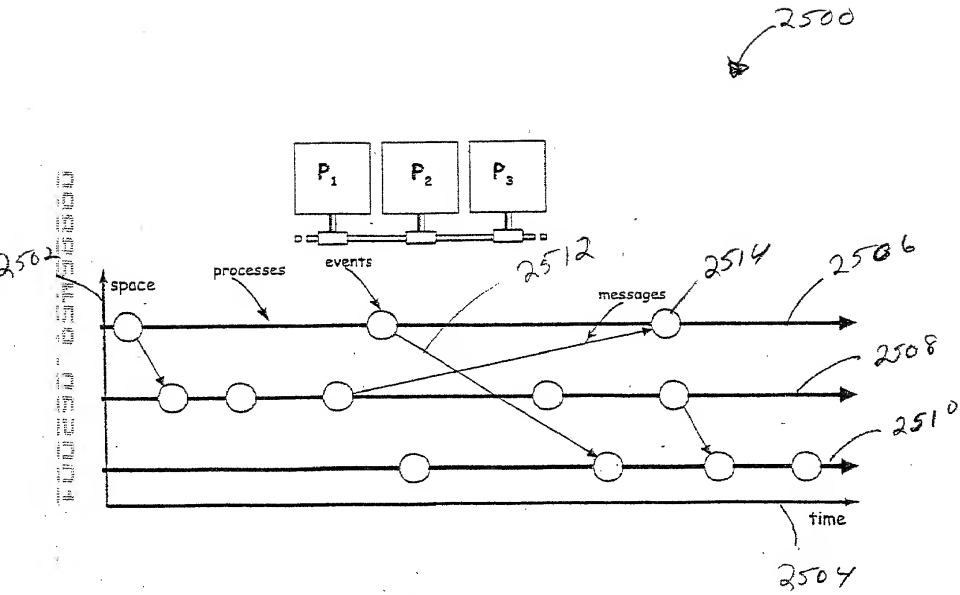


Figure 25

(prior art)

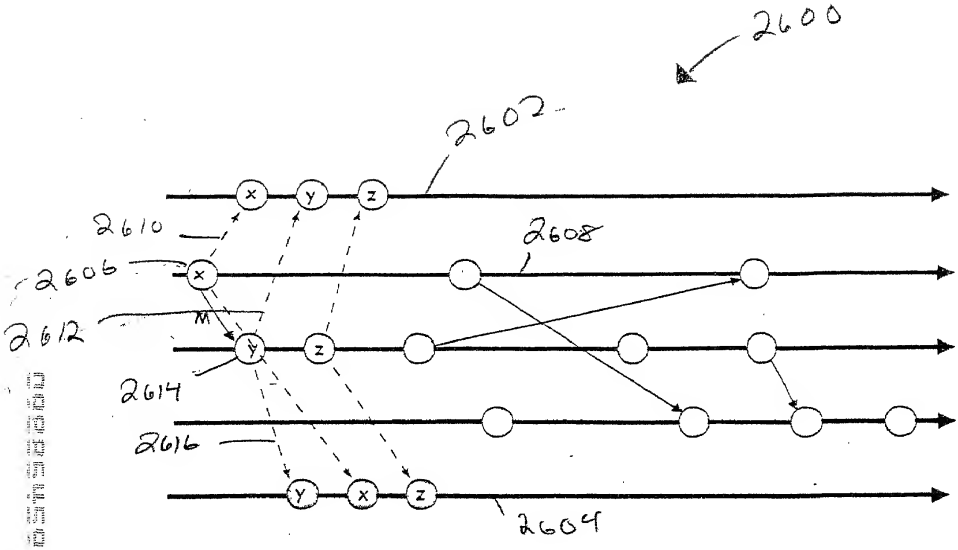


Figure 26

(prior art)

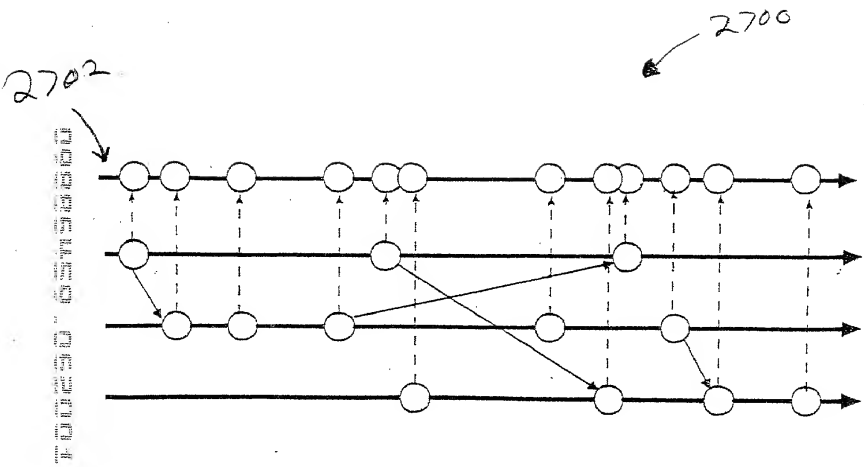


Figure 27

(prior art)

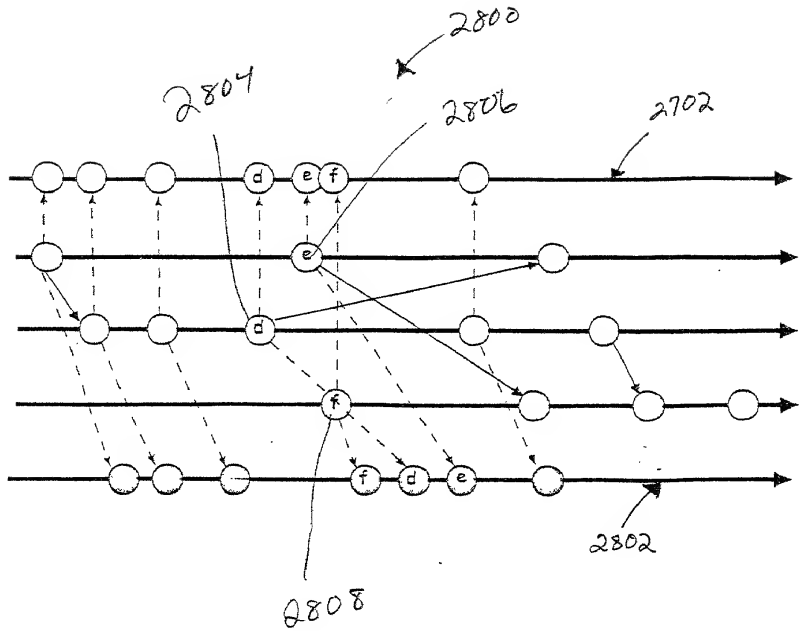


Figure 28

(prior art)

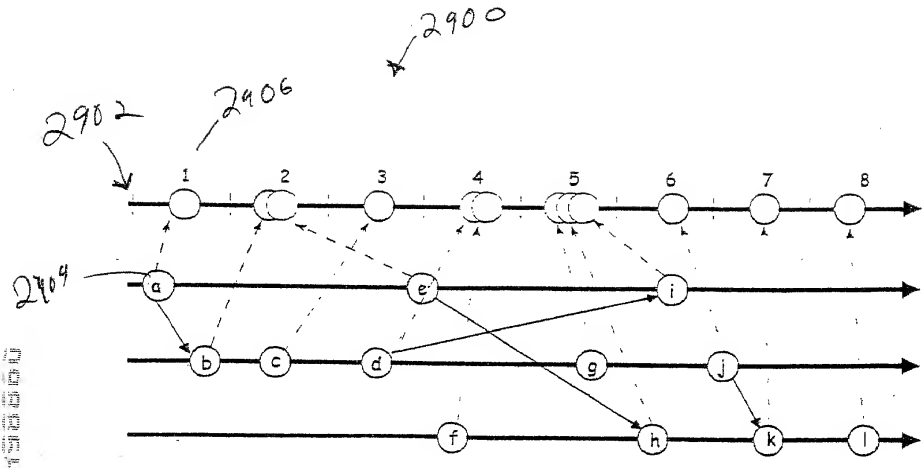


Figure 29

(prior art)

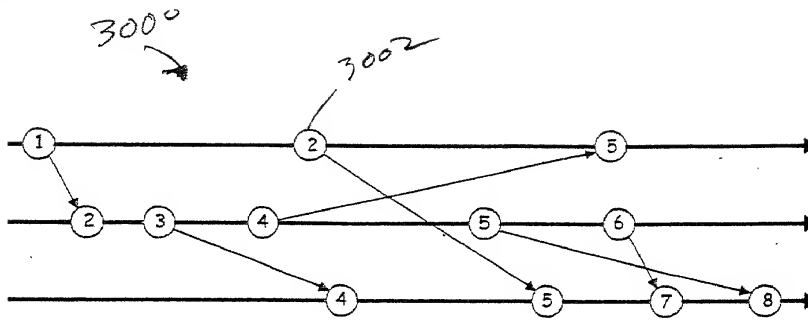


Figure 30

(prior art)

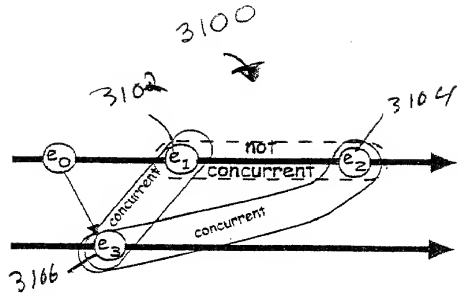


Figure 31

(prior art)

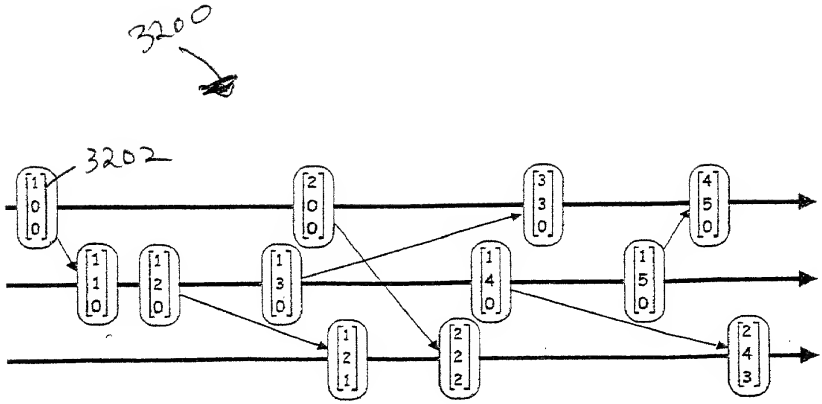


Figure 32

(prior art)

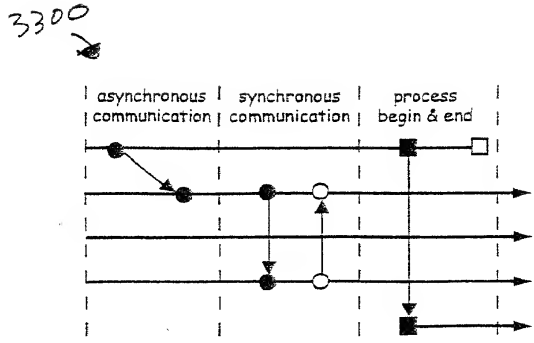


Figure 33

(prior art)

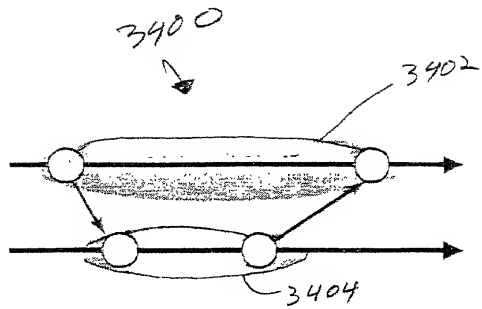


Figure 34

(prior art)

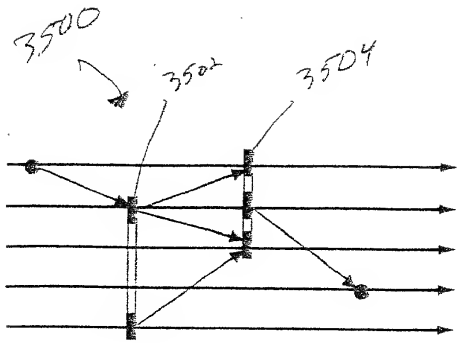


Figure 35

(prior art)

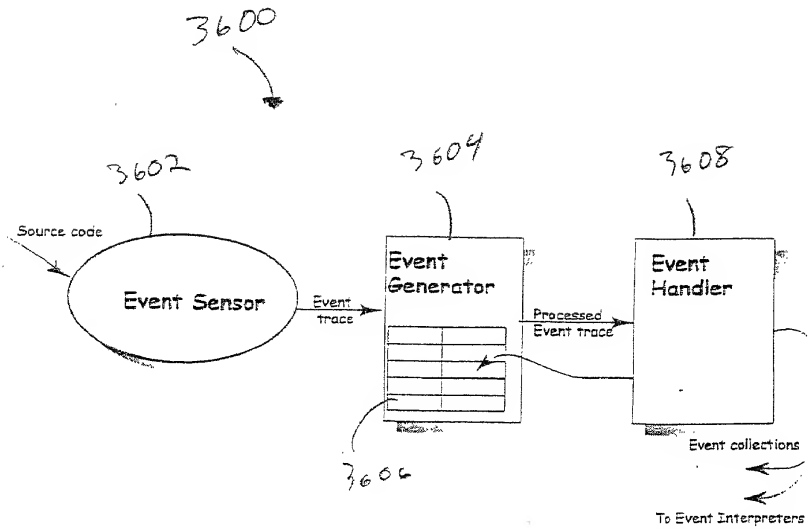


Figure 36

(prior art)

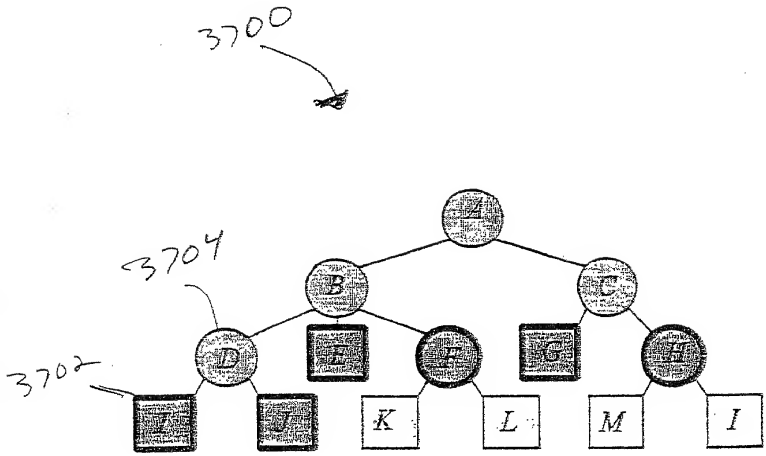
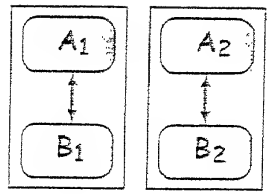
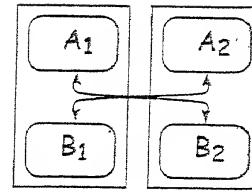


Figure 37

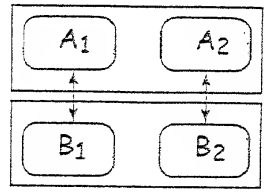
(prior art)



(a) Cohesion(P) = 1.0
Coupling(P) = 0.5



(b) Cohesion(P) = 0.0
Coupling(P) = 1.0



(c) Cohesion(P) = 1.0
Coupling(P) = 0.5

Figure 38

(prior art)

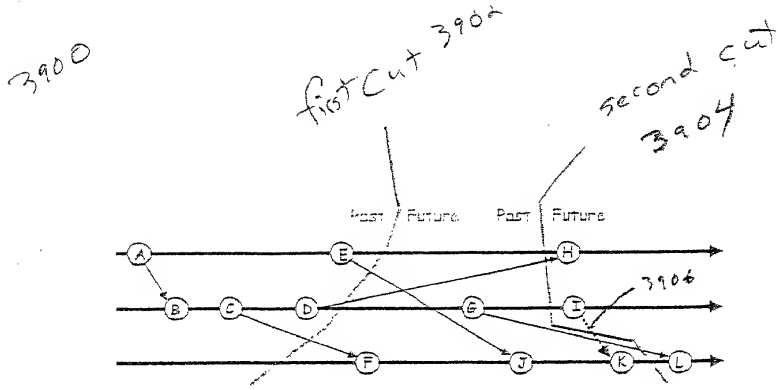


Figure 39

(prior art)

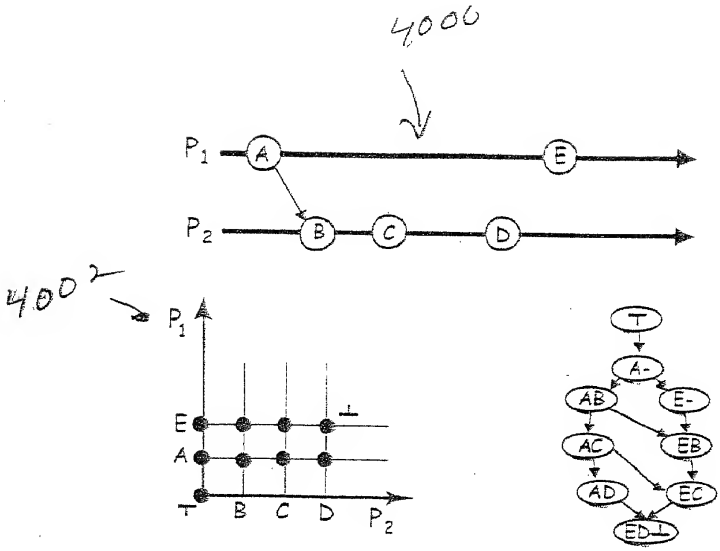


Figure 40

(prior art)

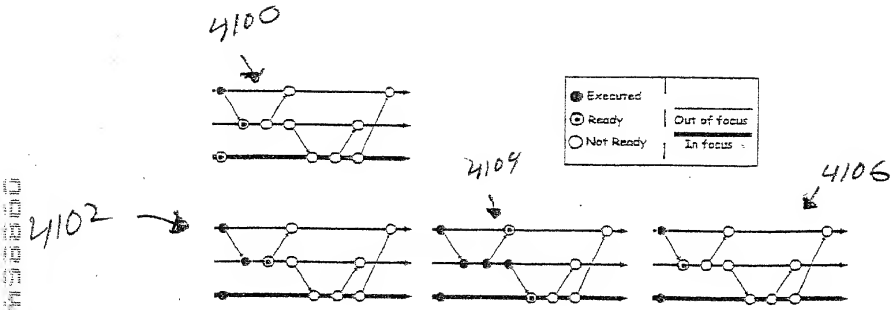


Figure 41

(prior art)

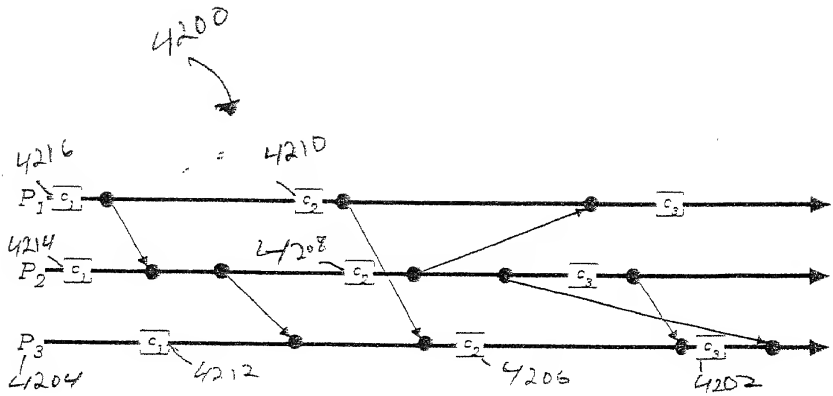


Figure 42

(prior art)

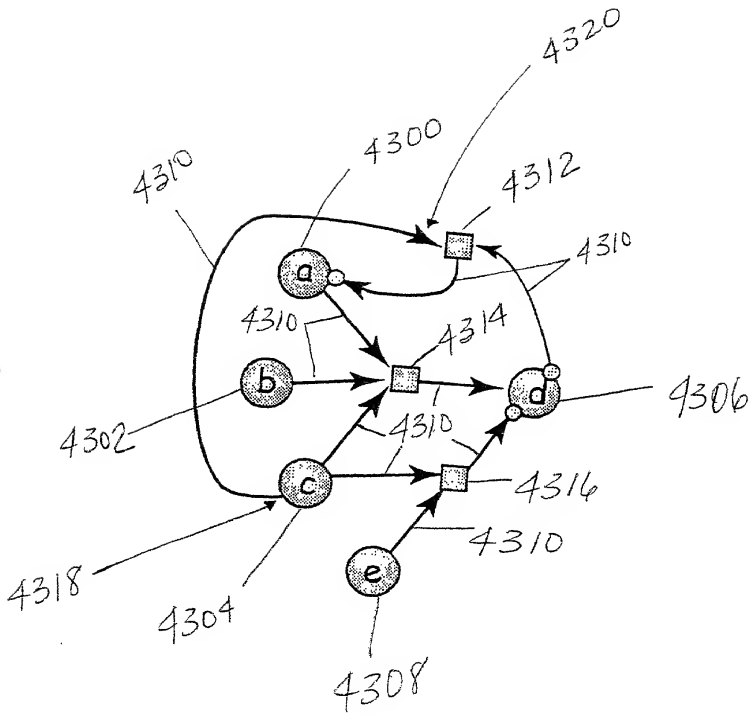

4320
4300
4310
4312
4310
a
4310
4314
b
d
4306
4302
4310
c
4316
4310
4318
e
4304
4308

FIG. 43

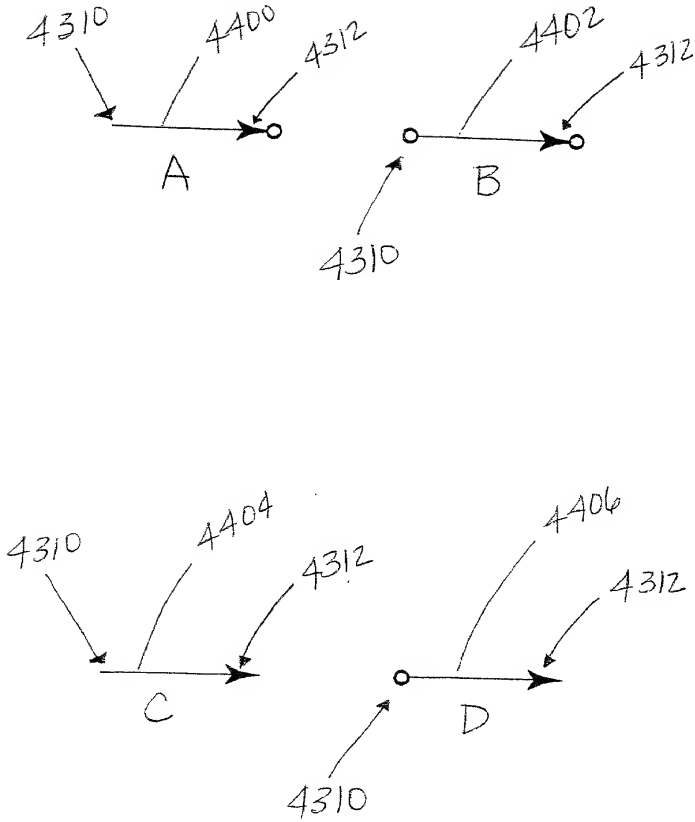

4310
4400
4312
A
4402
4312
B
4310
4310
4404
4312
C
4406
4312
D
4310

FIG. 44

4,000,930 - 6/31/2000

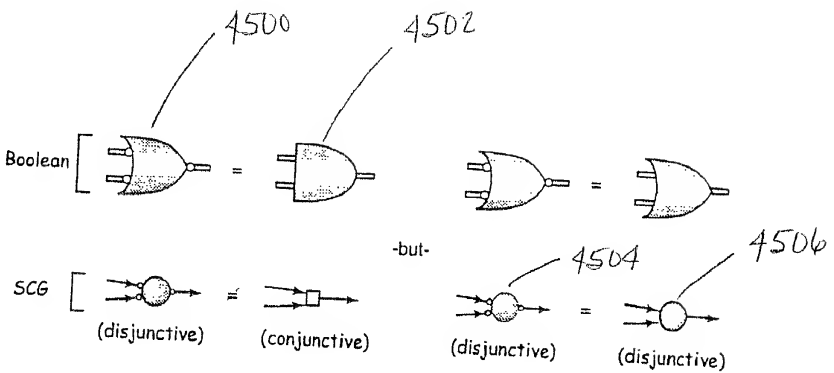
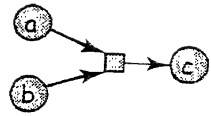
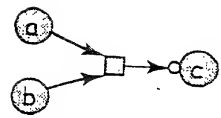


FIG. 45



$a \wedge b \Rightarrow c \;=\; \neg(a \wedge b \wedge \neg c)$

A



$a \wedge b \Rightarrow \neg c \;=\; \neg(a \wedge b \wedge c)$

B

FIG. 46

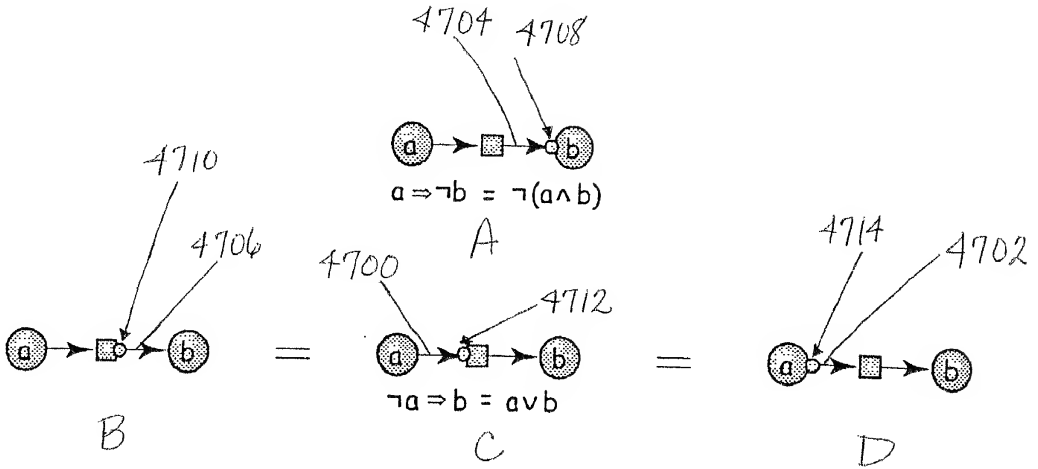

4704
4708
a
b
a⇒¬b = ¬(a∧b)
A
4710
4706
4700
4712
a
b
=
a
b
¬a⇒b = a∨b
C
4714
4702
=
a
b
B
D

FIG. 47

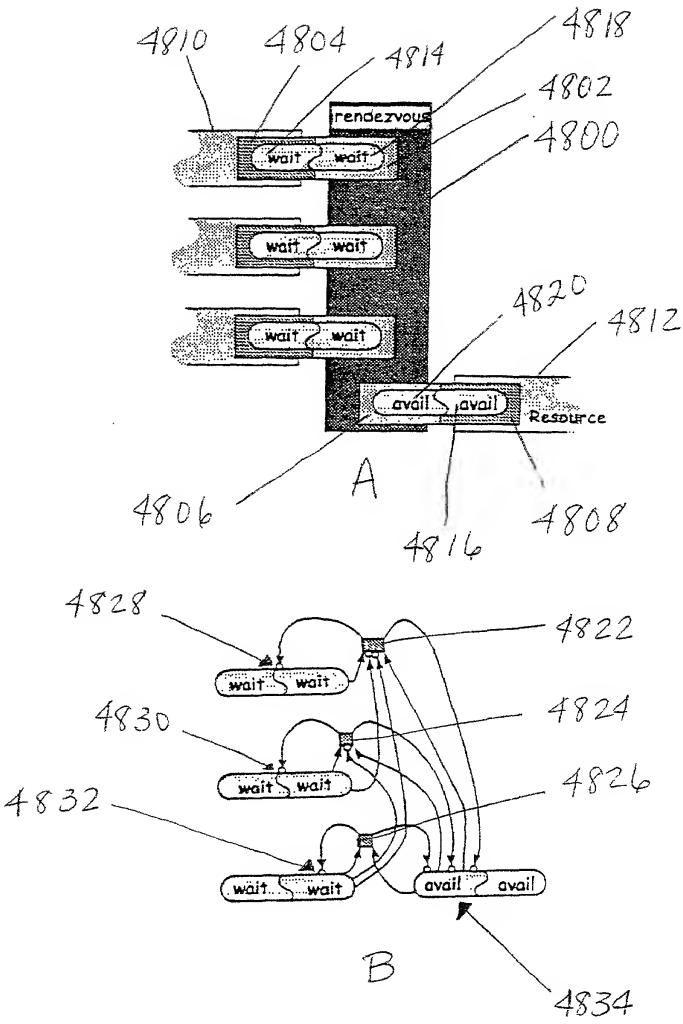

4810
4804
4814
4818
4802
4800
rendezvous
wait
wait
wait
wait
wait
wait
4820
4812
avail
avail
Resource
A
4806
4816
4808
4828
4822
wait
wait
4830
4824
wait
wait
4832
4826
wait
wait
avail
avail
B
4834

FIG. 48

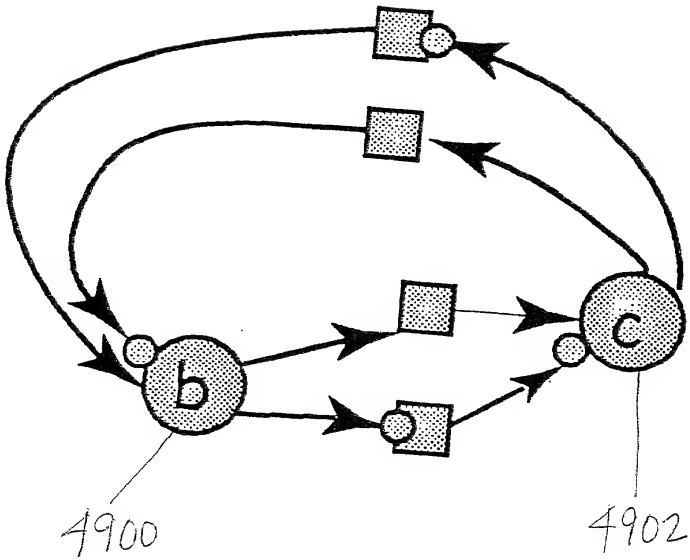
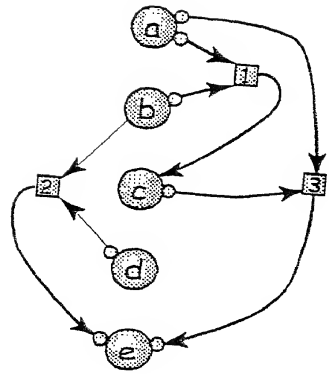


FIG. 49



A

$$\underbrace{(a \vee b \vee c)}_{1} \wedge \underbrace{(\neg b \vee d \vee \neg e)}_{2} \wedge \underbrace{(a \vee c \vee \neg e)}_{3}$$

B

$$\underbrace{(\neg a \wedge \neg b \Rightarrow c)}_{1} \wedge \underbrace{(b \wedge \neg d \Rightarrow \neg e)}_{2} \wedge \underbrace{(\neg a \wedge \neg c \Rightarrow \neg e)}_{3}$$

C

FIG. 50

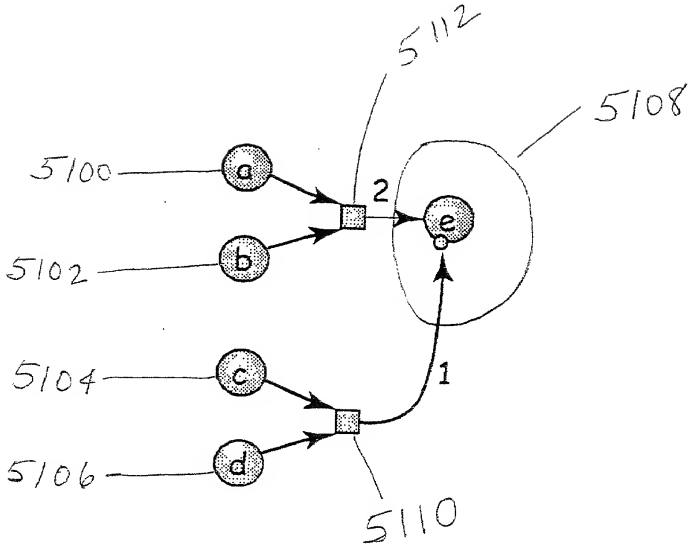


FIG. 51

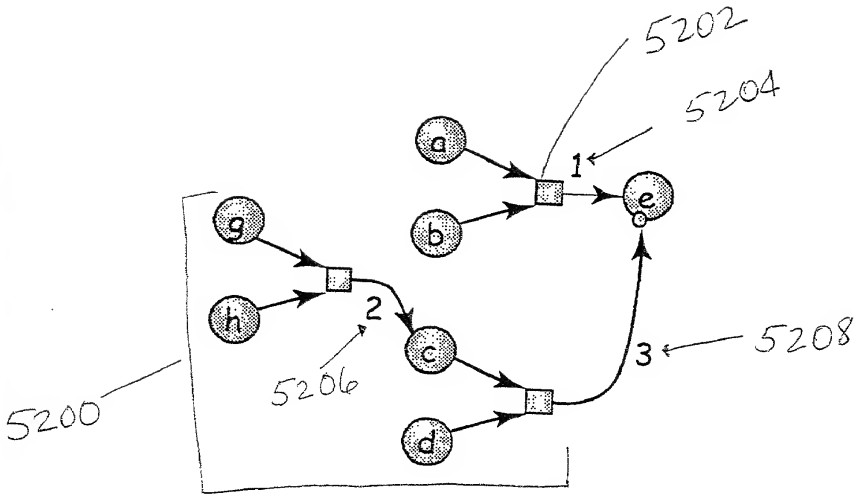


FIG. 52

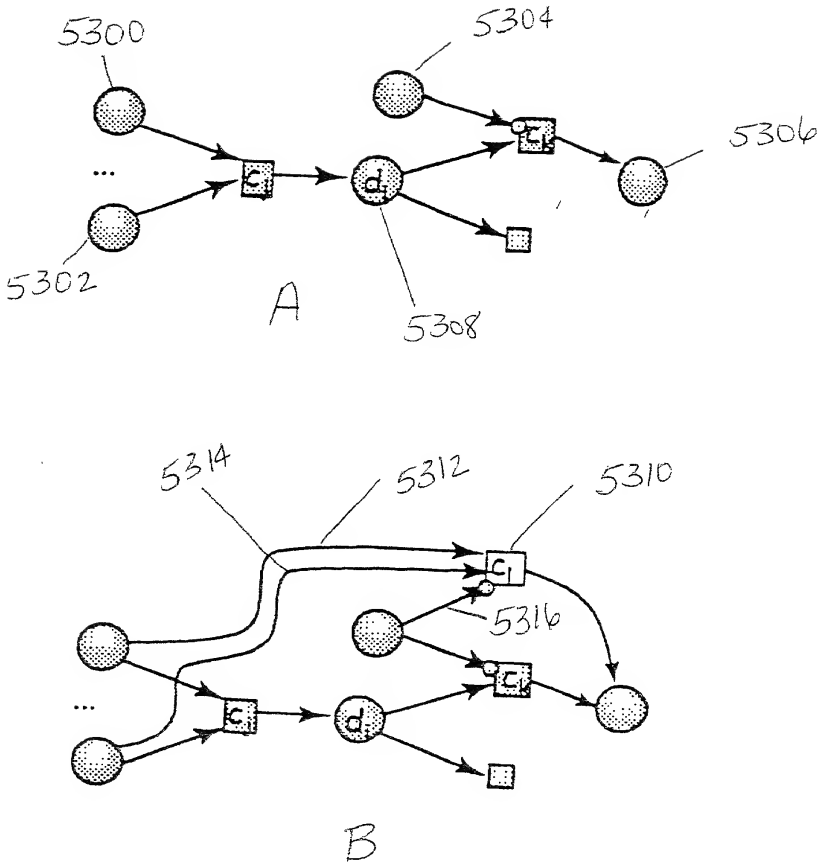


FIG. 53

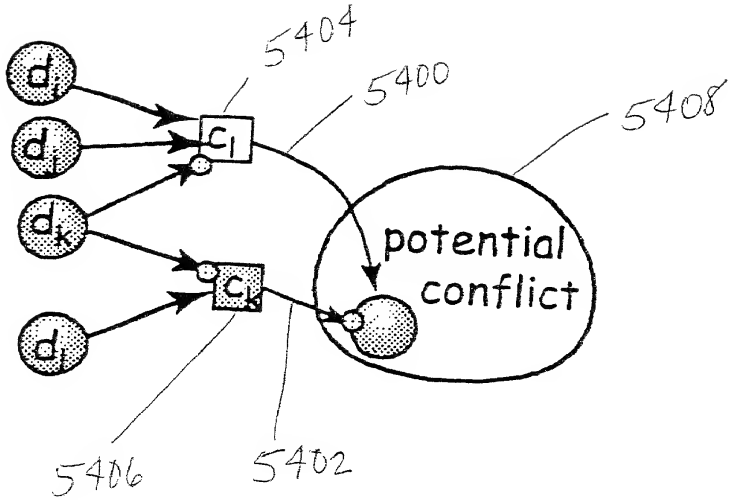


FIG. 54

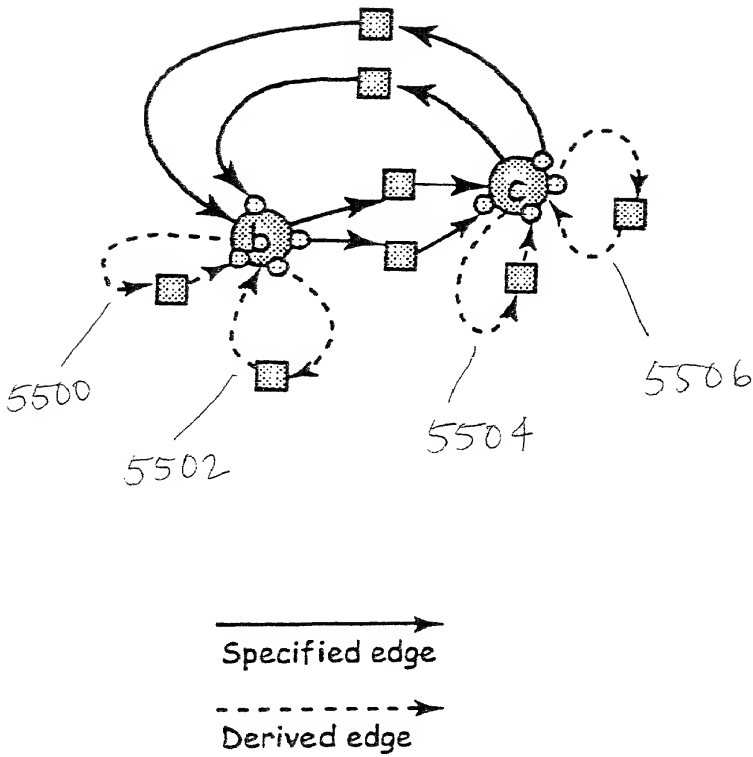
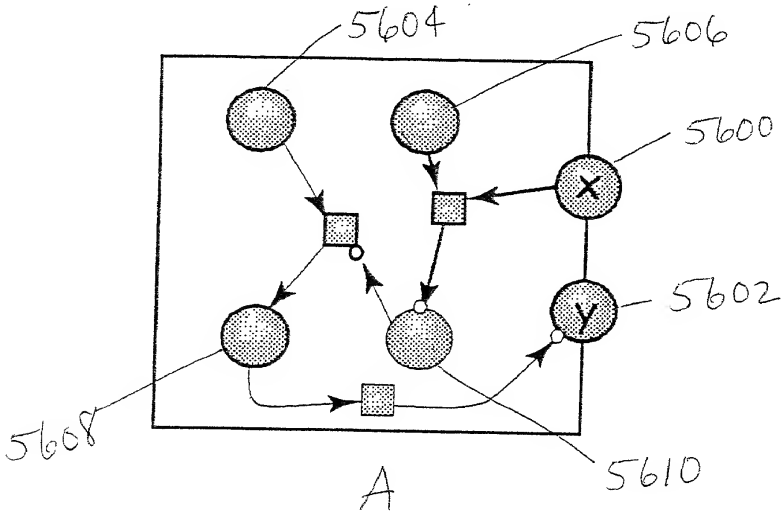


FIG. 55



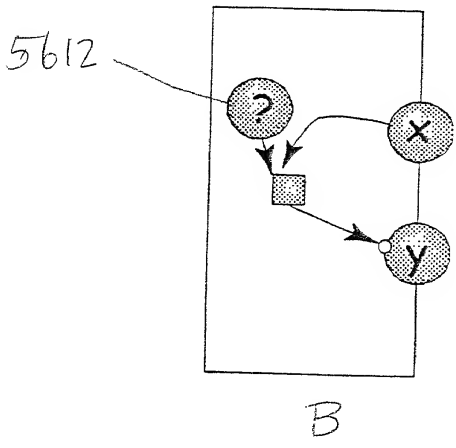


FIG. 56

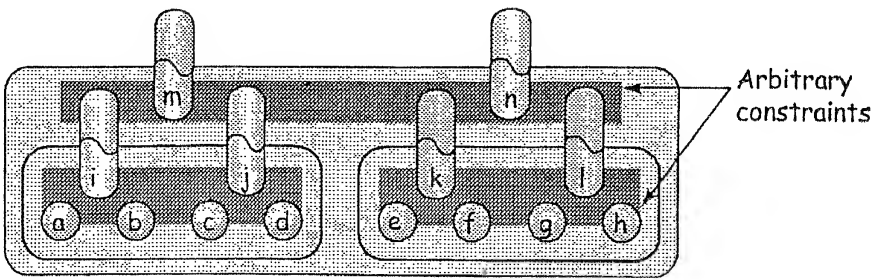


FIG. 57